



New Triumph Residence **Safety Type** Panel Board



BULLETIN No. 27



Safety  **Type**

TRIUMPH
LINE

Residence Type "R"

Panel Board

"It's absolutely safe
for you to handle
fuses, *now!*"

Frank Adam
ELECTRIC COMPANY
ST. LOUIS



"The Triumph Line of Standardized Safety Type Panel Boards"



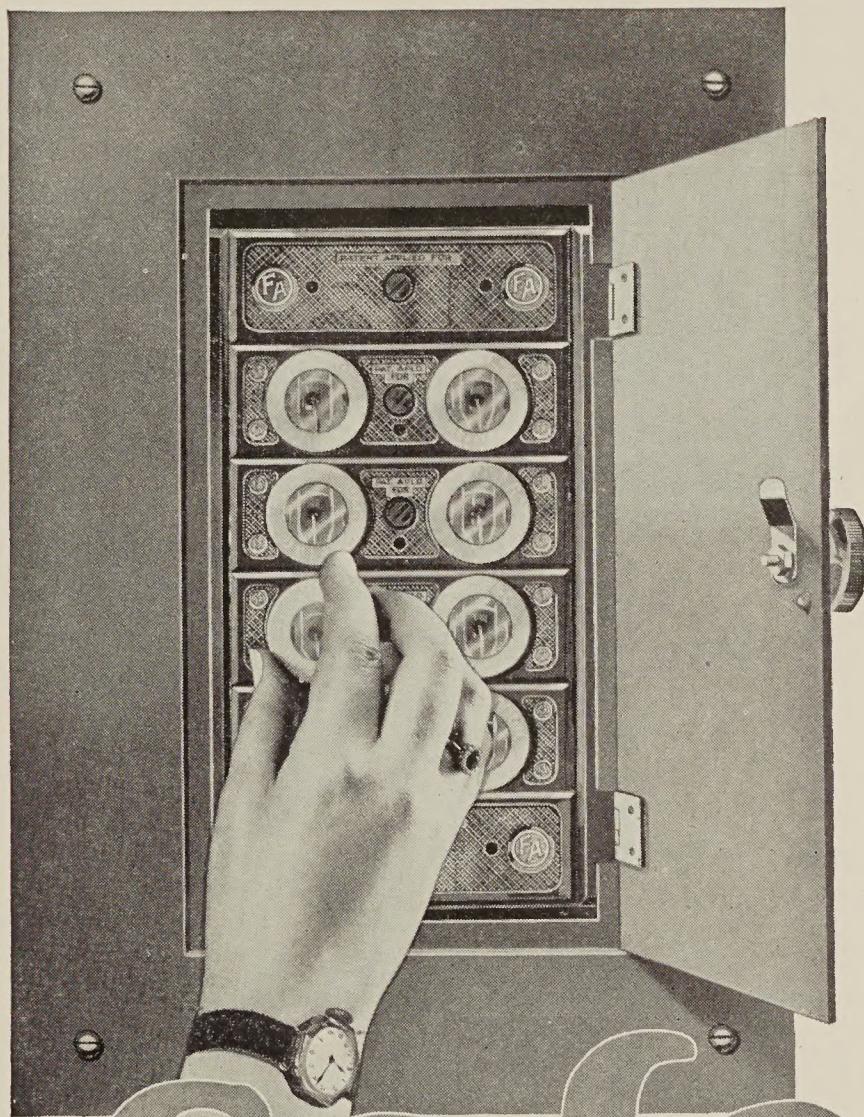
IN the home, where women and children often come in contact with the house circuit distribution board, there is the greatest need of a panel board with the maximum protection. Yet strangely enough, though great improvement has been made in panel boards for business and industrial uses the home still uses, in most cases, the old porcelain open block affair.

This new Triumph Safety Type, Sectionally Constructed Residence Panel Board will be welcomed in every home where safety is appreciated. That it has many other advantages as well does not so vitally concern the home builder, whose one thought is the full protection it affords to his loved ones.

Specifications
for Wiring
Residences
Complete
Pages 5 and 6

Specifications
for Type "R"
Panel Boards
Inside Back
Cover

Wiring the Home for Comfort and Convenience











Safe!



Type "R"

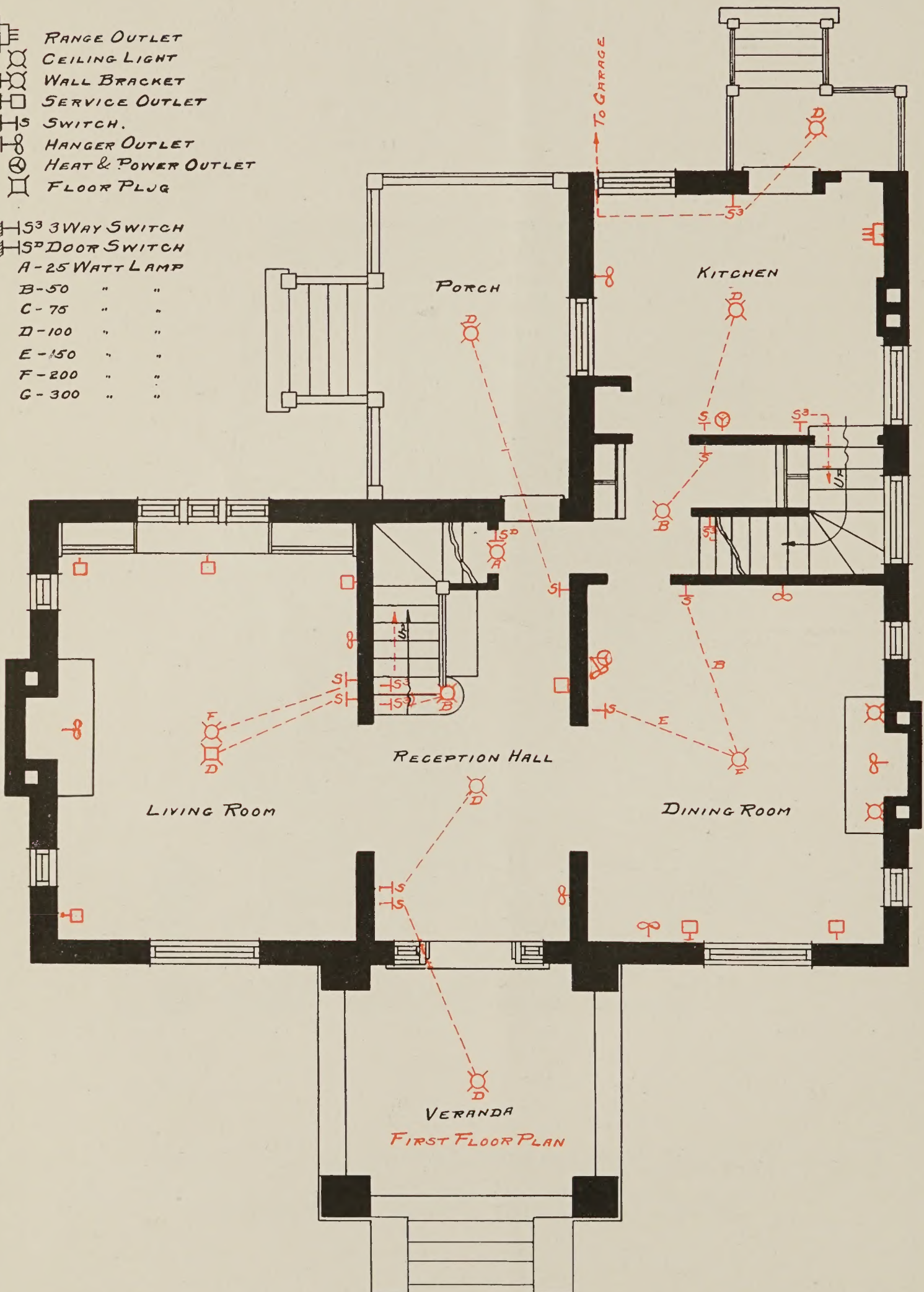
The first Standardized Sectionally Constructed
Safety Type Panel Boards for Residences



"The Triumph Line of Standardized Safety Type Panel Boards"

-  RANGE OUTLET
-  CEILING LIGHT
-  WALL BRACKET
-  SERVICE OUTLET
-  SWITCH.
-  HANGER OUTLET
-  HEAT & POWER OUTLET
-  FLOOR PLUG

-  3 WAY SWITCH
-  DOOR SWITCH
- A - 25 WATT LAMP
- B - 50 " "
- C - 75 " "
- D - 100 " "
- E - 150 " "
- F - 200 " "
- G - 300 " "





Wiring The Home For Comfort and Convenience

There are two divisions in the electric wiring plans for the modern home—the lighting and the power and heat requirements. Since comfort and labor-saving depend on the abundance and skillful location of outlets to supply these needs, the matter should be studied with relation to your own home plans. The floor plans on the opposite and succeeding pages will be of great assistance, as they show the number, kind and location of outlets that should be in the average home.

It is wise to anticipate and provide outlets for your future electrical devices as well as those you will install at once, as the cost of the additional wiring for these while the house is being built will be only a fraction of what it would be after the house is completed.

It is a common error to skimp on electrical wiring installation, yet no other single feature of the home can alleviate so much drudgery and add or subtract real enjoyment as the presence or absence of full facilities. The power outlet for vacuum sweeper, washing machine, iron, mangle, heat outlets for radiators and the extra switch here, the additional baseboard receptacle there all mean, in the years to come, many thousands of saved steps.

Just what light and other outlets each room should have, as well as the exact location of them, is a matter of plans and individual preference, of course. However, if you will study the typical wiring plans here and arrange for a similar layout, you can be sure of having an installation above

the ordinary. Consult your architect or contractor—they will be glad to help you. With pad and pencil, walk mentally into each room and note the conveniences you would like to find there. Insist on quality in your installation—the best costs very little, and the expensiveness of cheapness is proverbial.

Here is a list that you can start with:

LIVING ROOM

Lights and Switches, Vacuum Cleaner, Fan Hanger, Electric Clock, Picture Lighting..

DINING ROOM

Lights and Switches, Power Outlets for Table and Sideboard Utensils, Signal Bell, Fan Hanger, Vacuum Cleaner, Picture Lighting.

KITCHEN

Lights and Switches, Ice Box, Range, Iron, Fan Hanger, Signal Bell, Dish Washer, Power for Electric Utensils, Water Heater, Exhaust Fan.

LAUNDRY

Lights and Switches, Washing Machine, Mangle, Iron.

CHAMBERS

Lights and Switches, Fan Hanger, Portable Room Warmer, Vacuum Cleaner, Hot Pad, Sewing Machine Motor, Curling Iron.

BATHROOM

Lights and Switches, Portable Water Heater, Vibrator, Heater Hanger Outlet, Radiator.

BASEMENT

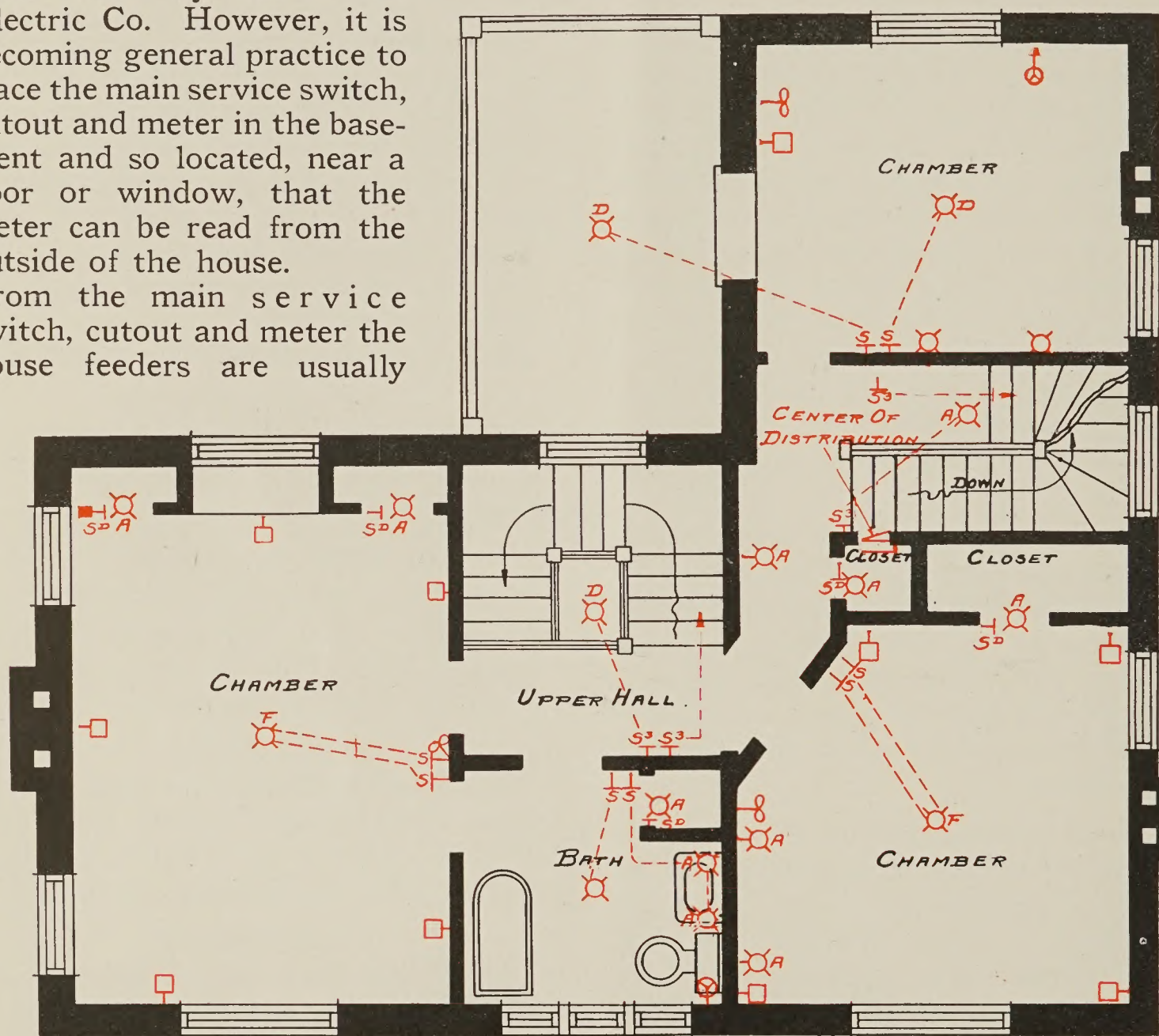
Motor Grindstone, Bell Transformer, Ice Cream Freezer.

These are suggestions and should be used to build upon.

THE CENTER OF DISTRIBUTION

The main service connection to residences is usually made from the overhead feeder system of the Electric Co. However, it is becoming general practice to place the main service switch, cutout and meter in the basement and so located, near a door or window, that the meter can be read from the outside of the house. From the main service switch, cutout and meter the house feeders are usually

It is advantageous, as you can easily see, to place this panel board as close to the center of distribution as possible, to reduce the amount of wires and labor the distribution requires. It is also of paramount importance



SECOND FLOOR PLAN

brought to the center of the distribution of the branch circuits, for connection through fuse connection of the Panel Board with the wires of the branch circuits which run to the switches and outlets throughout the building. As only a certain amount of current can be used from one circuit, the number and capacity of outlets determine the number of circuits your home requires.

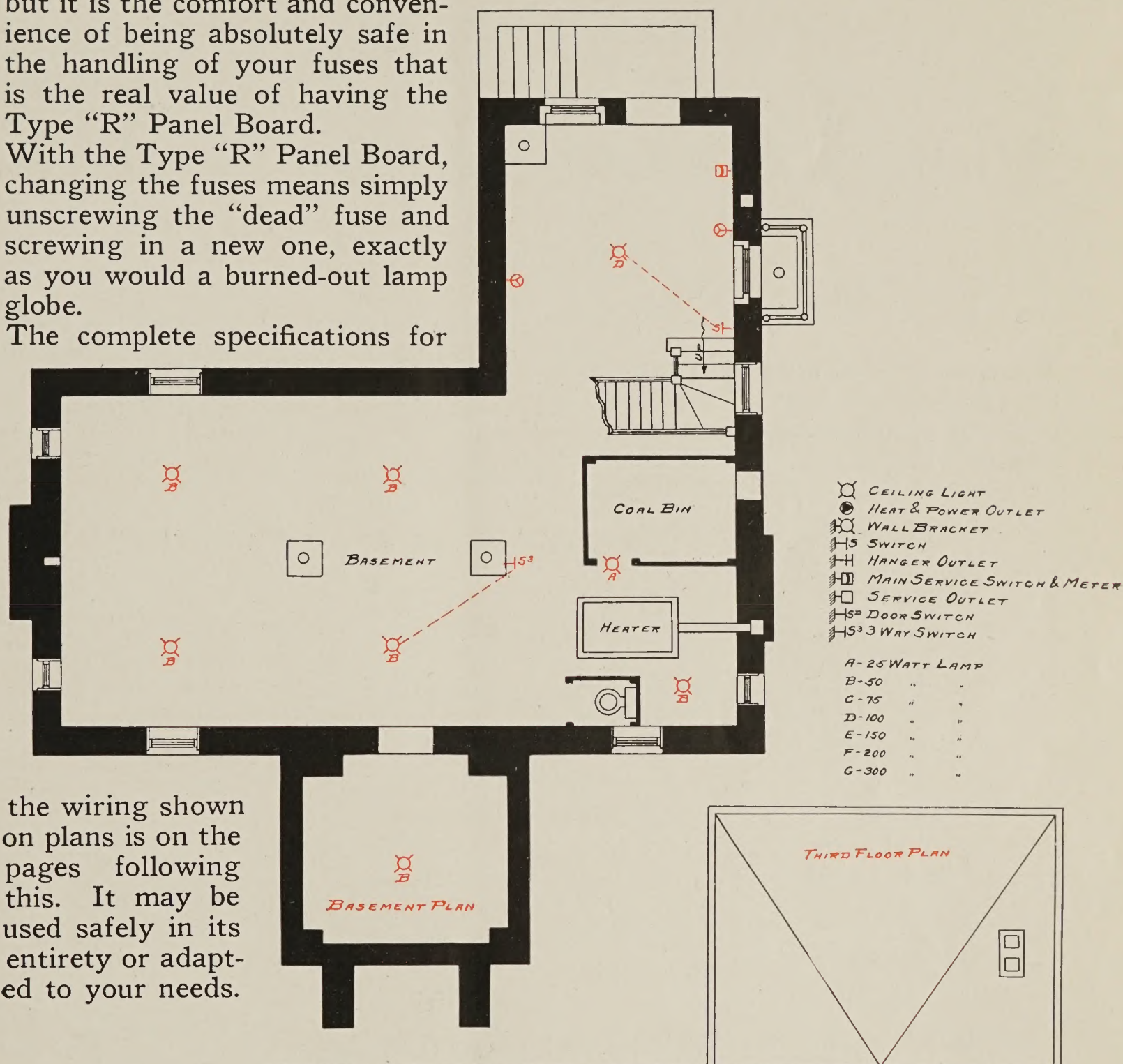
that an absolutely safe panel board be installed, so that you can replace the fuses without delay or danger. The "F-A" Type "R" Panel Board being a safety type, can be placed at the center of distribu-

tion, whereas, the old dangerous kind had to be placed in the cellar or other out of the way location. This thoroughly practical, yet new, method of

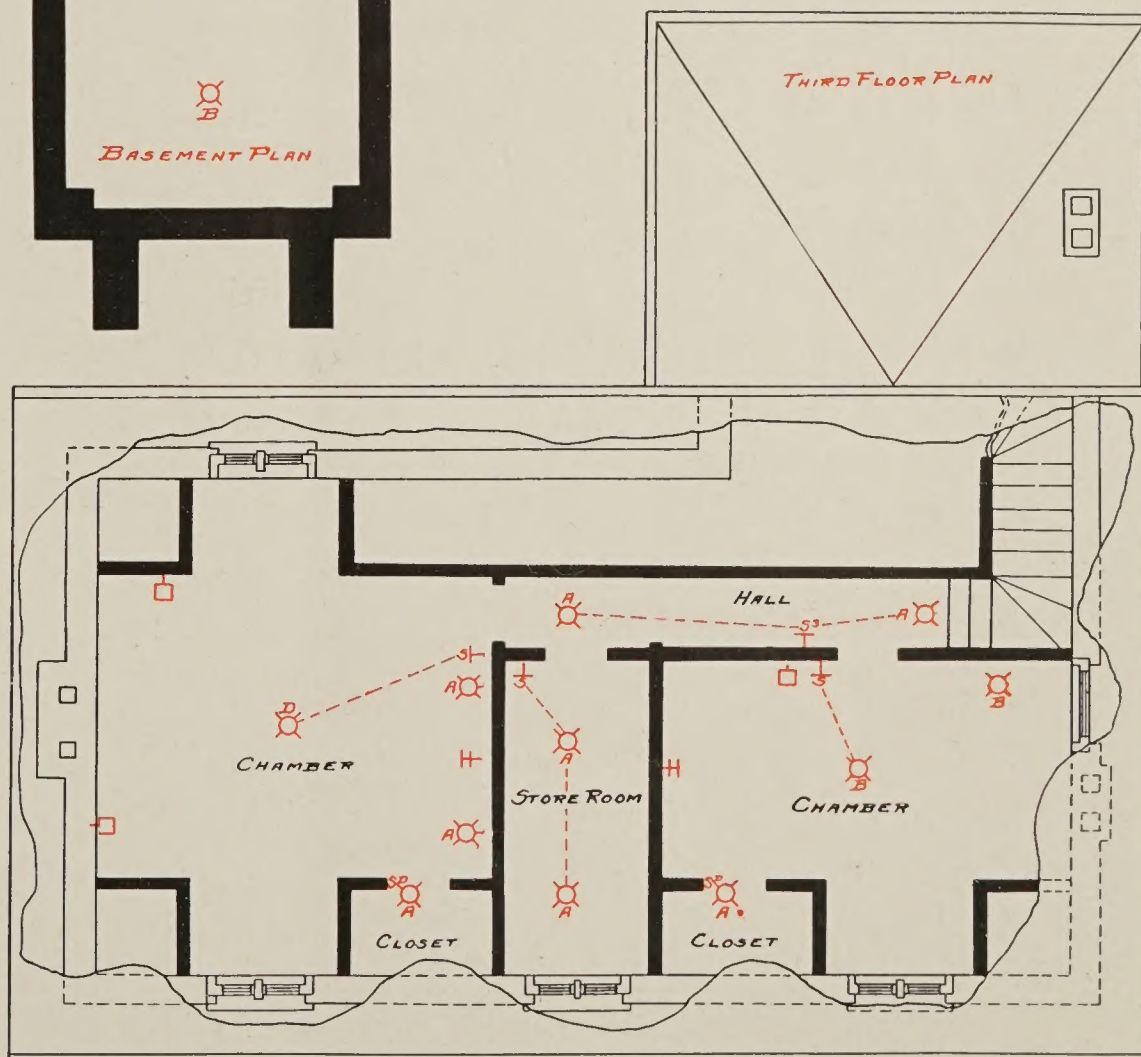
wiring will save on money, of course, but it is the comfort and convenience of being absolutely safe in the handling of your fuses that is the real value of having the Type "R" Panel Board.

With the Type "R" Panel Board, changing the fuses means simply unscrewing the "dead" fuse and screwing in a new one, exactly as you would a burned-out lamp globe.

The complete specifications for



the wiring shown on plans is on the pages following this. It may be used safely in its entirety or adapted to your needs.





Complete Specifications

for

Wiring a Modern Average Residence

GENERAL

The electrical work will be sublet, but all of the conditions of the general building specifications must be considered as a part of the specifications for this section of the construction.

The contractor's bid must be based upon the complete specifications and plans with all materials as specified. He may, however, make an alternate for other material with his price either higher or lower than for the material as specified. No changes will be considered after the contract is let.

All material used in this installation must show the Underwriters' Laboratories' label, unless that entire classification of material is not in the label service when it must be listed in the Underwriters' Laboratories' approved list of material.

The entire installation must be made according to the National Electrical Code standard, and the Inspection Department having jurisdiction must be asked to make their inspection based on these specifications and the accompanying plans.

This specification does not include the furnishing or installing of fixtures or lamps.

SERVICE ENTRANCE

The service entrance (in overhead) must not be less than 15 feet from the ground, and the feeder conduit must be equipped with an approved

service conduit Type DRF or equal, and have feeder cables extend through the conduit three feet.

MAIN SERVICE FEEDER

From service entrance conduit install conduit and cables to the service switch, install conduit concealed, and make feeders of ample capacity for outlets shown on plans, and with the number of cables to conform with the Lighting Company's feeder system that will connect to this building. Conduit must be Galvanized.

SERVICE ENTRANCE SWITCH AND METER

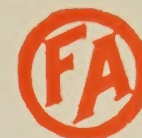
Where marked on plans in basement and in such a position that the meter can be read through the basement entrance door, place an externally operated service switch of full capacity of feeder and with meter test links and meter trim for the proper sized meter that will be used in this installation.

HOUSE FEEDER

From service switch and meter continue the same size of feeder in iron conduit to the distributing center as located on plans on second floor.

ELECTRIC RANGE

If an outlet for electric range is installed, then install, either above or alongside of meter, two externally operated switches, one of the full capacity for electric range (having a capacity of not less than three No. 6 cables,) and the other for full capacity



of house feeder, and connect the house feeder to this switch and extend in conduit three No. 6 wires from the range feeder switch to an outlet not less than four feet above the floor, and convenient for connecting to electric range. At this point a special conduit must be furnished.

DISTRIBUTING CENTER

Where located on second floor plan, and about five feet to center, place one F-A Triumph standardized type "R" safety type panelboard, having a sufficient number of branches to take care of all circuits to outlets for lighting fixture, universal duplex receptacles and hanger outlets, no circuit capacity to exceed 660 watts and for a separate branch circuit for each of the heat and power outlets in each bath room, one in kitchen, laundry, and also spare branch for additional circuit.

CIRCUIT WIRING

All branch circuit wiring must be done under the classification of knob and tube work, with conduit for those outlets and switches installed on brick walls. Wire and cable must be of approved make.

OUTLETS

All outlets for ceiling fixtures and brackets must be equipped with outlet box and finished with standardized fixture stud.

All switch outlets must be fitted with standard switch box and equipped with single pole flush tumbler switch with plate finished to match surrounding hardware. Wherever more than one switch is located at the same place, they must be located in gang boxes and plates.

There will be separate three-way switches as follows:

For the furnace light in basement

with switch on first floor and basement;

Rear stair lights on second and third floor with three-way switches on first, second and third floors;

Second floor ceiling lights with three-way switches on the first and second floors;

Light on newel post in reception hall with three-way switch on first and second floors.

BASEBOARD RECEPTACLE

At each plugging outlet as located on plans, furnish Duplex Universal Receptacle. Locate this in the center of flat space of base board.

HANGER OUTLETS

At all outlets marked hanger outlets furnish 7 ft from floor, F-A catalog No. 45 hanger outlets. These outlets must be complete and securely fastened to studs of partition or into brick walls, so as to support either fan, heater, or a picture with lights.

HEAD AND POWER OUTLETS

At all heat and power outlets place 4 ft. from floor an outlet consisting of outlet box and one plate with double pole 20 Amp. switch, signal lamp, and 20 Amp. standard receptacle and plug.

INSPECTION

The contractor must notify in writing the inspection department having jurisdiction, and notify them that the specifications call for the inspection department to base their inspection on both the specifications and accompanying plans, and that the certificate for the completed job must particularly signify that the inspection has been made according to plans and specifications. The contractor is to pay the fee for the inspection certificate.



"The Triumph Line of Standardized Safety Type Panel Boards"

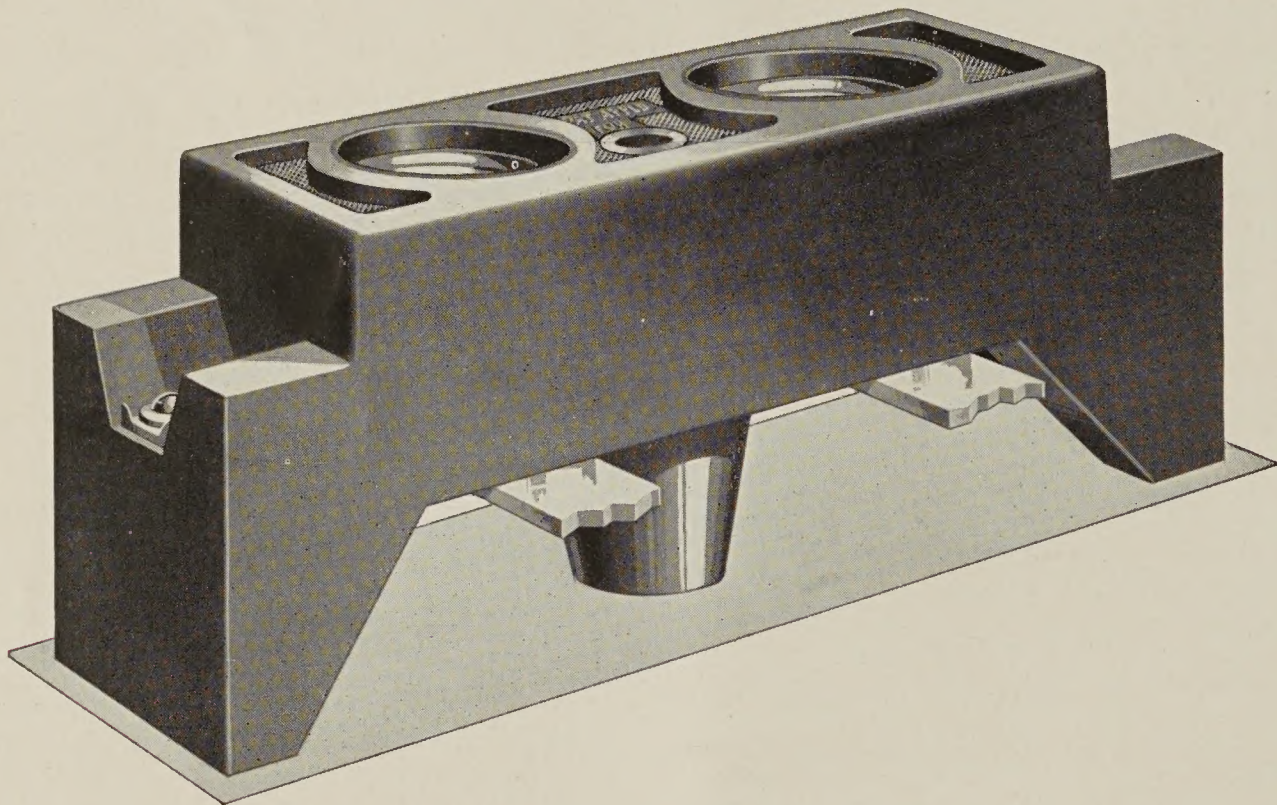
Frank Adam Electric Co.



Unit Construction Safety Type Panel Board

This is the first absolutely safe residence panel board having the advantages of unit construction, standardized manufacture and installation, and the only one that fits every

requirement in only two types. It is really a "sold-in-the-package" panel board, for it comes completely mounted in a cabinet ready for installing.



The "R" Type Section or Unit

This is the complete unit that forms the panel itself. It is unique yet fully practical. Each unit carries two fuses (one pair) and the neutral main bus bar is always at the left. It is simple and strong. Though it fastens to the bus bars of the mains it is also supported by the steel back of the cabinet. The base is of practically unbreakable composition, impervious to moisture and without mineral veins.

The advantages of this new Triumph Sectionally Constructed Residence Panel Board will be readily seen. *First*, it standardizes production, allowing a *better* panel to be built for less money than the old type one piece could with equal materials. *Second*, it permits quick purchase and immediate delivery. As it is a complete unit to

meet all specifications it can be bought from a jobber's stock or sent from the factory the same day the order is received. If through accident one unit be broken another can be quickly supplied, giving this new type all the flexibility the old porcelain fuse block. *Third*, much time can be saved on the installation as the board is complete, ready for connections. These are reduced to a minimum and terminal screws are always accessible. *Fourth*, standardization of panels permits standardization of practice and where Triumph Type "R" units are specified both architect and contractor benefit by the reduced amount of varying panel-board detail. *Fifth*, the owner of a Type "R" equipped home saves on the long life of the "R" and obtains absolutely safety at all times.

AN "R" RESIDENCE PANEL BOARD SHOWING FEATURES

Steel angle barriers top and bottom fully protect end gutters and are easily put in place after all connections are made. The slope or angle at the bottom prevents any refuse gathering there as it does in the old style cabinets.

Blank composition end section covers main terminal connection at top and bottom. The bottom end section has been removed in this illustration to show the main terminals.

Standard N. E. C. fuse plug connection. No possibility of even the slightest injury. Only the back contact points are live when the fuses are out.

Composition barrier and side gutter cover. All wiring and circuit terminals completely covered. Held in place by only two screws, wiring easily accessible.

This bus bar is always connected to the neutral—one of the unique points that makes the "R" adaptable to all conditions.

Threaded metal clip to hold angle metal barrier and front with door.

Strong welded reinforced corner cabinet, code thickness steel

Ample wiring space. All circuit wires can be easily accommodated without crowding.

Main service connection can be made either top or bottom, both ends of bus bars having terminals.

Plenty of knockouts to permit service and all branch conduits to come in either top or bottom. Sides of cabinet have one $\frac{1}{8}$ " hole for each circuit for loom in open wiring work.

Note how accessible the branch terminals and the roomy gutter, making quick work of wiring this panel board. The barrier is removed to show circuit terminals.

Good strong latch and knob holds door flush with trim. Always presents a smooth, neat appearance. Front is adaptable to either flush or surface installations.



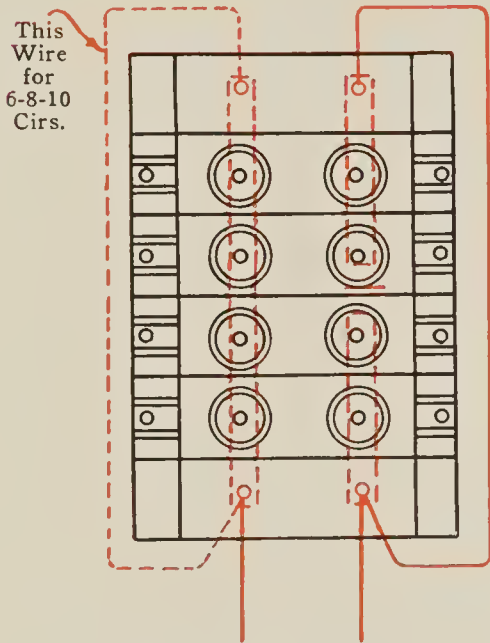
"The Triumph Line of Standardized Safety Type Panel Boards"

These Two Standardized Panel Boards

Type "R" Safety Type Panel Boards and Cabinets

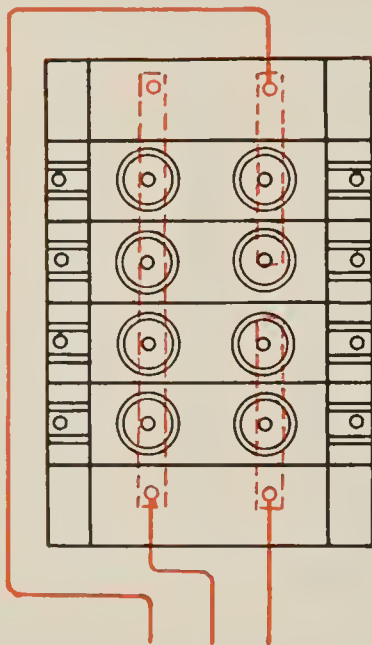
MAINS
125 VOLT 2 WIRE
125 VOLT BRANCHES
CAPACITY 6 AMP.
PER BRANCH

Wiring
Diagram
for
Two Wire
Service
Mains



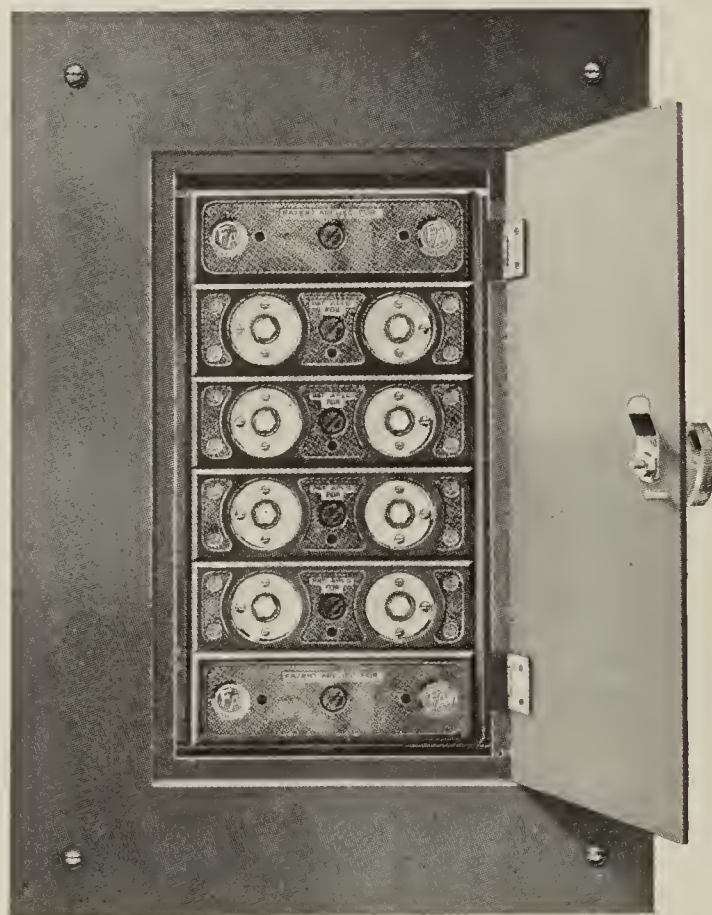
MAINS
125-250 VOLT 3 WIRE
125 VOLT BRANCHES
CAPACITY 3 AMP.
PER BRANCH

Wiring
Diagram
for
Three Wire
Service
Mains



WITH MAIN LUGS ONLY

There are advantages to the "R" Type Main Lugs Only that cannot be said of any other panel board. The one model can be used for either two-wire 125 Volt, or three-wire 125-250 Volt service (see wiring diagrams to the left) can be flush or surface mounted, use with either conduit or knob and tube work and has top or bottom service connections. The "R" can also be placed close to the center of distribution as it has no exposed contacts of any kind and can be safely located where it will be easily accessible to women or children.



FOR BOTH TWO & THREE WIRE SERVICE

PANEL. Made of sections of molded material.
BRANCHES: N. E. C. Plug Fuse Conn.
BOX. Code Thickness Steel Gutter Type.
FRONT. Code Thickness Steel, Dead Black Paint.

Branches	Outside Dimensions on Box			Combination of Panels—Barriers, Boxes and Fronts			In Stock
	Wide	High	Deep	Catalogue Number	List Price	Approximate Weight	

MAIN TERMINALS ONLY

2	9 1/2	9 1/2	3 3/4	MR2	\$21.00	16 lbs.	*
4	9 1/2	12 1/2	3 3/4	MR4	\$25.00	20 "	*
6	9 1/2	15 1/2	3 3/4	MR6	\$29.00	25 "	*
8	9 1/2	18 1/2	3 3/4	MR8	\$33.00	30 "	*
10	9 1/2	21 1/2	3 3/4	MR10	\$37.00	35 "	*

WITH MAIN LUGS ONLY

This type of Residence Panel-board is best for general purposes and can be obtained in sizes from 2 to 10 branch circuits.

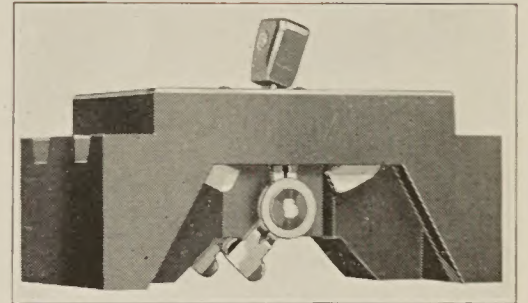


Fit *Every* Residence Requirement

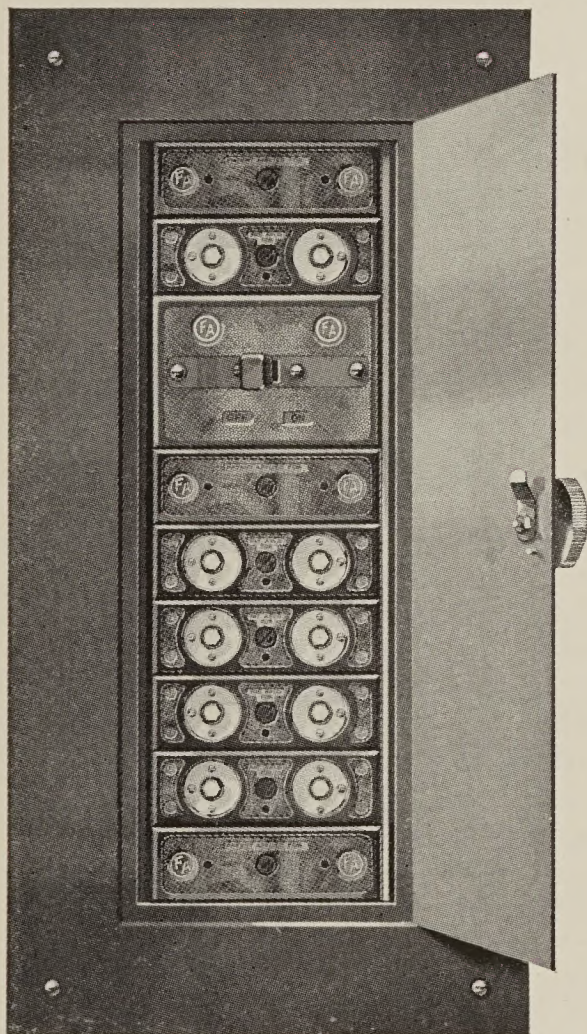
Type "R" Safety Type Panel Boards and Cabinets

**WITH
MAIN
SWITCH
AND
MAIN FUSE
CONNECTIONS**

To meet the requirements of small residences and stores, and larger residences where it is possible to locate a practical center of distribution in combination with the service entrance, we have designed a combination of our Residence Safety Type Panelboard, with main service switch, and main fuse connections.



Triumph "R" Type Switch Section

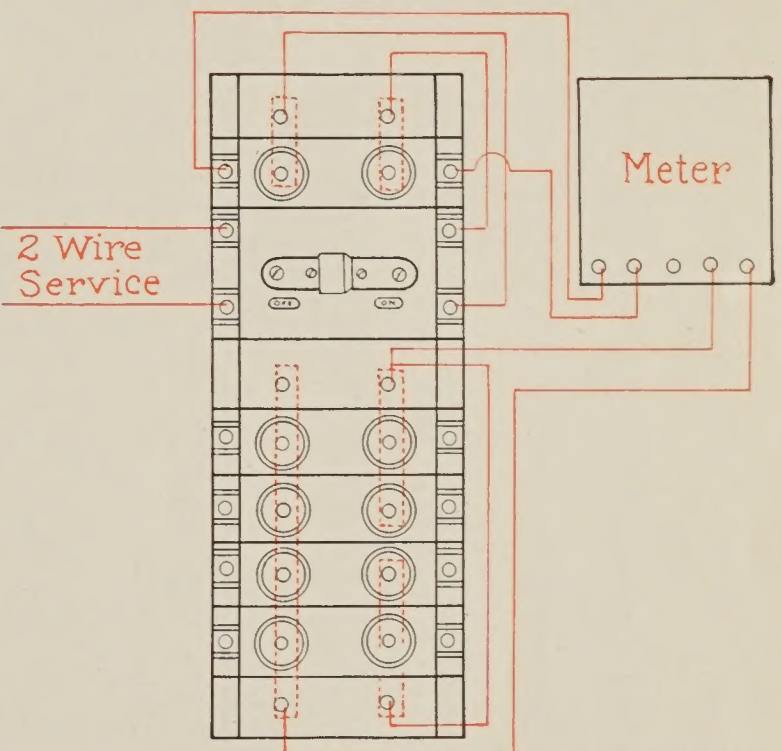


We have standardized the "R" Type Panel boards with main switch for two-wire service, in four branches only, because our tumbler switch is of 30 Ampere capacity.

The main switch capacity in the three-wire feeder system will easily carry eight 660 Watt branches and the "R" type with main switch is available up to that size.

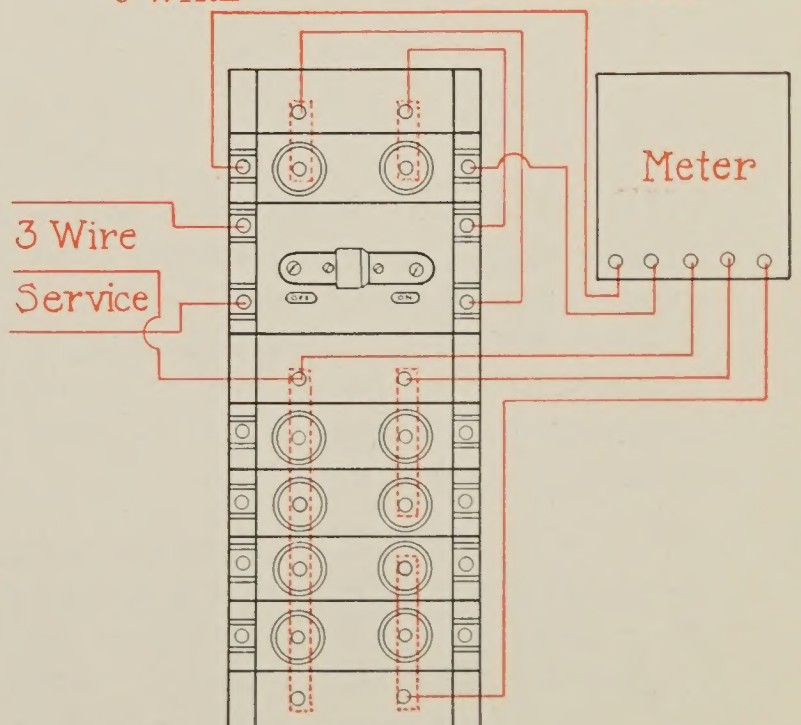
**MAINS
125 VOLT
2 WIRE**

**125 VOLT BRANCHES
CAPACITY 6 AMP.
PER BRANCH**



**MAINS
125-250 VOLT
3 WIRE**

**125 VOLT BRANCHES
CAPACITY 3 AMP.
PER BRANCH**



PANEL. Made of sections of molded material.
BRANCHES: N. E. C. Plug Fuse Conn.
BOX. Code Thickness Steel Gutter Type.
FRONT. Code Thickness Steel, Dead Black Paint.

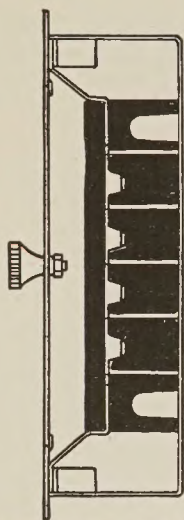
Branches	Outside Dimensions on Box			Combination of Panels—Barriers, Boxes and Fronts			In Stock
	Wide	High	Deep	Catalogue Number	List Price	Approximate Weight	
Two Wire Main With D. P. Main Switch and Fuse Connections							
2	9½	15½	4	MR2S	\$28.00	25 lbs.	*
4	9½	18½	4	MR4S	\$32.00	30 "	*
Three Wire Main With D. P. Main Switch and Fuse Connections							
2	9½	15½	4	MR2S	\$28.00	25 lbs.	*
4	9½	18½	4	MR4S	\$32.00	30 "	*
6	9½	21½	4	MR6S	\$36.00	35 "	*
8	9½	24½	4	MR8S	\$40.00	40 "	*



"The Triumph Line of Standardized Safety Type Panel Boards"

Type "R"

General Details

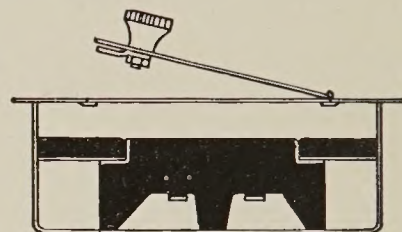


VERTICAL CROSS SECTION

Showing angle barriers and size of upper and lower gutter.

CONSTRUCTION

Type "R" Triumph Panel Board Cabinet Boxes are all made from one piece of sheet steel, reinforced at the four corners and spot welded. Made with gutter space all around panel. Steel fronts are made from a single sheet of Code Gauge Steel. The space for door is cut out, leaving a trim (mat) of the proper width all around the door. There are no joints or patching at the corners. A strip along the inner edge of the trim is depressed in such a manner as to form a $\frac{3}{4}$ inch rabbet for the door to close against.



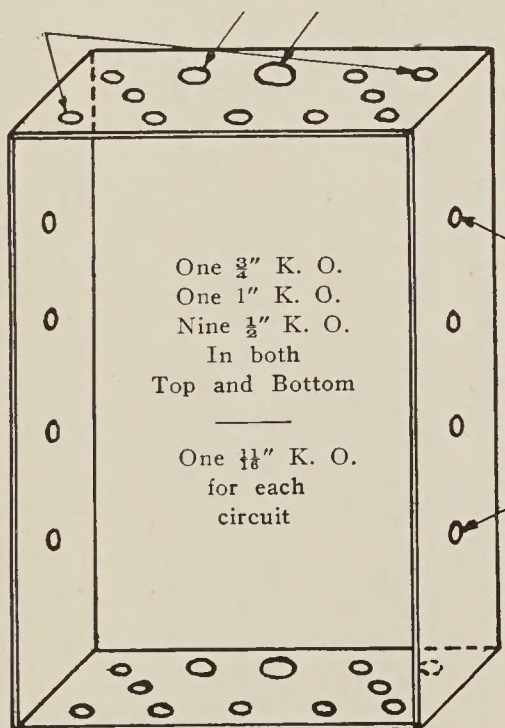
HORIZONTAL CROSS SECTION

BARRIER PIECES

Barriers which are supplied with unit are easily put in place and conceal all connections.

NOTE: — 1920 Code completely every live part is covered. that all cutout boxes and cabinets having more than 4 circuit branches shall be provided with barriers (partitions) for separating wiring gutter space from the cutout, switches, panel boards and other apparatus, unless the wires leave the cabinet directly opposite their terminal connections.

Standard Cabinets for Type "R" Panel Boards



The Type "R" Panel Boards are always supplied with cabinet boxes with standard knockouts as shown in diagram to the left. These provide openings both top and bottom for one 1 inch, one $\frac{3}{4}$ inch and nine $\frac{1}{2}$ inch conduits. Sufficient $\frac{11}{16}$ inch knockouts are provided in sides to allow one for each circuit. As this standard cabinet is suitable for all ordinary conditions, no special types are likely to be needed, but if required they can be made up special

FLUSH OR SURFACE

The "R" Type Cabinets, like all F-A standard gutter cabinets can be used for both flush and surface installation.

The Type "R" benefits —

THE OWNER—A modern safety device at slight, if any, increase over the dangerous old style fuse blocks, together with the added value this obvious improvement gives to his property and the inherent protection if he is also the tenant.

THE ARCHITECT—Greatly reduced detail in specifying and full security in the accuracy and satisfaction of the installation. The "R" Triumph is refine-

ment in equipment that naturally reflects credit on architects who specify safety devices in the interest of their clients.

THE CONTRACTOR—Simplicity of installation and standardization that eliminates the many special built, or expensive built-on-the-job types is a big advantage to the contractor. Quick delivery from the nearest jobber is a time and money saver too.

SPECIFICATIONS

for Residence Panel Boards

Type "R" Safety Type

DISTRIBUTION CENTER

TYPE "R" WITH MAIN LUGS ONLY

Where located on plans, and about five feet to center, place one FA Triumph standardized type "R" safety type panel board, having a sufficient number of branches to take care of all circuits to outlets for lighting fixture, universal duplex receptacles and hanger outlets, no circuit capacity to exceed 660 watts, and for a separate branch circuit for each of the heat and power outlets in each bath room, one in the kitchen, dining room and laundry, and also one spare branch for additional circuits.

DISTRIBUTION CENTER

NOTE: Where a combination of the service entrance and distributing center can be made, an "R" Type panel board with main switch and main fuse can be used.

TYPE "R" WITH MAIN SWITCH AND MAIN FUSE CONNECTIONS

Where located on plans, and about six feet to center, place one FA Triumph standardized type "R" safety type panel board, with main switch and main fuse connections and bring out the meter loops about two inches above the panel cabinet. This panel board to have a sufficient number of branches to take care of all circuits to outlets for lighting fixtures, universal duplex receptacles and hanger outlets, no circuit capacity to exceed 660 watts, and for a separate branch circuit for each of the heat and power outlets in bath rooms, one in the kitchen, dining room and laundry, and also one spare branch for additional circuits.

Some Other



Products

Hanger Outlets

Originally designed for fan hanging, "F-A" Hanger Outlets not only accomplish this service better than anything else, but are found useful in many other ways. The three most common applications are shown

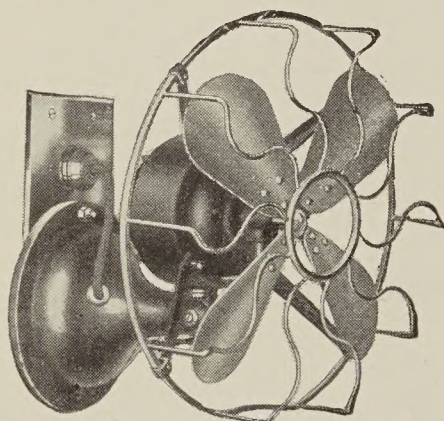


Fig. One

here — fan hanging in Fig. 1, picture lighting in Fig. 2 and heater hanging in Fig. 3. The practical value of these uses is quite obvious. Fans are up out of the way, eliminating danger to the fingers of children and careless adults.

The unsightly, unsafe and dust catching brackets usually employed are eliminated and when the fan is taken down, the flush plate of the "F-A" Hanger Outlet leaves the wall unmarred. Wall-strain and vibration are stopped and operating noise minimized.

When "F-A" Hanger Outlets are used for picture lighting all ugly, incongruous molding outlets and trailing wires are done away with and absolute security in hanging heavy, valuable pictures is assured.

"F-A" Hanger Outlets are ideal for use with heaters, because they do away with twisted, entangling cords and get the heater up out of the way of children. Scorched clothes and blistered furniture are impossible, and the grave danger of fatal shocks from wet contacts in bath and washrooms is forever absent.

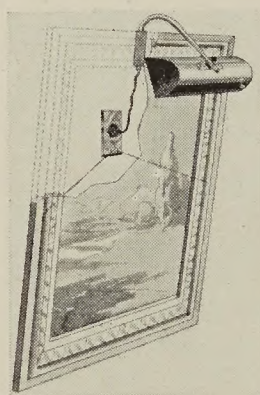
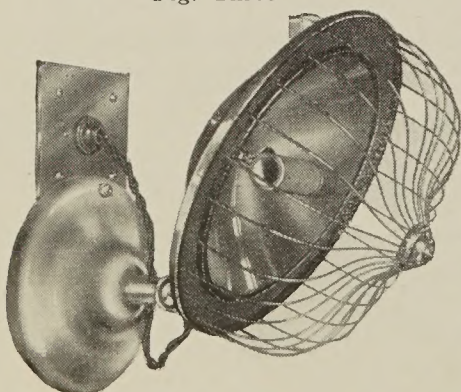


Fig. Two

Fig. Three



A strong feature of "F-A" Hanger Outlets is the adjustable inner cover that makes it possible to adjust the outer plate to plumb position even when the box itself has been installed out of plumb. Send for special Bulletin describing both the Hanger Outlets and Floor Boxes.

Reversible Cover Floor Boxes

One of the most popular products in the "F-A" line is the "F-A" Reversible Cover Floor Box, an exclusive type made only by us. In service, "F-A" Floor Boxes appear as shown in Fig. 4, which illustrates in cross section and in phantom the many strong features of this product. The new threaded split bushing which makes possible removal of appliance plugs without unscrewing the cover plates, the sturdy, pressed steel construction of the box and the watertight, round, rubber washer that permits level installation of the floor plate regardless of the position of the box are all clearly shown.

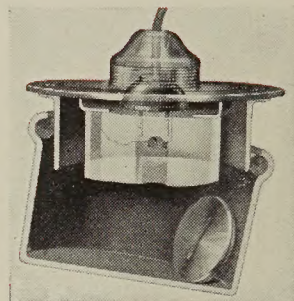


Fig. Four

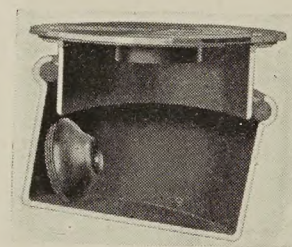


Fig. Five

In Fig. 5 is shown a cross section of an "F-A" Floor Box out of service. The split bushing has been dropped into the bottom of the box where it is quickly available when the box goes back into service, the cover reversed and the plug screwed into place. The box is now sealed against dust or water and offers absolutely no obstruction. Its strong construction makes it a part of the floor and its one-cover feature does away with storage and lost parts.



The Triumph Line
of Standardized
Safety Type

Panel Boards

Where more than ten circuits provided for in the "R" type Panel Board are necessary, the Triumph "P" Type safety Panel Board shown in Fig. 6 supplies an ideal installation. Its narrow construction permits installation in narrow wall sections and its shallowness allows it to be placed flush in a five-inch wall without off-setting. Where a board with branch switches is essential, the Triumph "T-P" Type will provide a superior installation. Both the "T-P" and "P" type come with or without main switch. Two and three wire service connections available. Send for special Bulletins more fully describing these members of the Triumph Line.

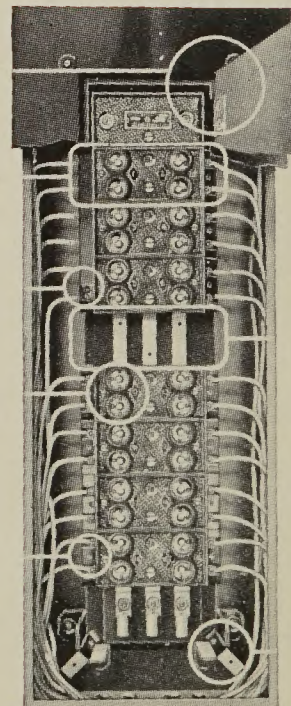


Fig. Six